

## **YIELD ESTIMATION OF DIFFERENT CROPS/HECTARE**

### **Yield**

The total dry matter produced by a crop is known as biological yield and a fraction of the biological yield which is useful for human is known as economic yield.

### **Yield Estimation of Field Crops**

Yield estimation of various crops have been attempt with the use of yield components. Yield cost of Rice crop are as follows-

#### **01. RICE**

What would be the yield of rice grains,if the average penicle density/m<sup>2</sup>- 260, No. of field grains/penicle- 136, Test weight- 20g.Estimate the yield of rice?

#### **Solution**

**Yield of rice (ton/ha)**= (10,000 X No. of panicle/m<sup>2</sup> X No. of grains/panicle X Test weight)÷(1000 X 1000 X 100 X 10).

= (10,000 X 260 X 136 X 20)÷(1000 X 1000 X 100 X 10).

= 7.072 ton/ha.

#### **02. WHEAT**

Yield Estimation of wheat grain and straw from following information-

- Spacing- 20cm X 3cm.
- No. of effective tilles/plant.
- No. of grains/panicle- 32.
- Test weight- 40 g.
- grain:straw- 1:1.5

#### **Solution**

Spacing= 20 X 3 cm<sup>2</sup>=0.2 X 0.03 m<sup>2</sup>= 0.006 m<sup>2</sup>

0.006 m<sup>2</sup> place have 1 till

= 1 m<sup>2</sup> place have (1÷0.006) till = 500 tills.

**Yield of wheat grain**= (10,000 X No. Effective tills/m<sup>2</sup> X No. of grains/panicle X test weight)÷(1000 X 1000 X 100 X 10).

= (10,000 X 500 X 32 X 40)÷(1000 X 1000 X 100 X 10).

= 6.4 ton/ha.

**Yield of wheat straw**= (6.4 X 1.5) = 9.6 ton/ha. [given that- grain: straw= 1:1.5].

### **03. MAIZE**

Yield Estimation of maize from following information-

- Spacing- 75cm X 30cm = 0.75 X 0.3 m<sup>2</sup>=0.225 m<sup>2</sup>.
- No. of cobs-2.
- No. of grains row/cob-10.
- No. of seeds/grain row- 25.
- Test weight- 200 g.

#### **Solution**

**Yield of maize**=(10,000 X cobs/plant X grains row/cob X No. of seeds/grain row X test weight)÷(1000 X 1000 X 100 X 10 X spacing/m<sup>2</sup>).

= (10,000 X 2 X 10 X 25 X 200 g)÷(1000 X 1000 X 100 X 10 X 0.225).

= 4.44 ton/ha.

### **04. SUGARCANE**

Yield Estimation of sugarcane from following information-

- No. of millable cane/clump- 15.
- spacing of clump- 90 X 60 cm<sup>2</sup>= 0.54 m<sup>2</sup>.
- Weight of cane- 600 g.

#### **Solution**

**Yield of Sugarcane**= (10,000 X No. of millabl cane/clump X Weight of cane)÷(spacing/m<sup>2</sup> X 1000 X 100 X 10)

$$= (10,000 \times 600 \times 15) \div (0.54 \text{ m}^2 \times 1000 \times 100 \times 10).$$

$$= 166.66 \text{ ton/ha.}$$

## **05. JUTE FIBRE**

Yield Estimation of Jute fibre from following information-

- spacing of clump-  $25 \times 10 \text{ cm}^2 = 0.025 \text{ m}^2$ .
- Weight of matured plant- 65 g.
- Extractable fibre/percent- 7.5%.

### **Solution**

**Yield of Jute fibre** =  $(10,000 \times \text{Weight of matured plant} \times \text{Extractable fibre/percent}) \div (\text{spacing} \times 1000 \times 100 \times 10).$

$$= (10,000 \times 7.5 \times 65) \div (0.025 \times 1000 \times 100 \times 100).$$

$$= 19.5 \text{ Quintal/ha.}$$

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*[If any wrong has been seen in calculation, please Correction it]*